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SOCIETY OF ARTS.

FRIDAY, FEBRUARY 11th, 1853.

EXTRAORDINARY MEETING,

Tuesday, February 8th, 1853.

AN Extraordinary Meeting of the Society was held on Tuesday, the 8th inst., Sir John P. Boileau, Bart., Vice-President, in the Chair.

The names of seven candidates for membership were read.

The Chairman read a letter from Lord Carlisle, and from several other Noblemen and Gentlemen, expressive of their regret at not being able to be present. He also read the following letters from Sir John Pakington, Bart. and Elihu Burritt.

Eaton-square, February 5th, 1853.

Sir,—I fear I shall be unable to attend the meeting on the 8th instant, to which you have done me the honour to invite me in your note of the 3rd inst., but I greatly desire to see a system of cheap postage established between this country and our Colonies.

When I was at the Colonial Department, I pressed upon the Postmaster-General my opinion of the great importance of conceding this boon; and if I had continued in office, it was my intention to make every exertion to effect it.

I shall be happy to co-operate with your Council in any manner in my power, and I trust the present Government may be induced to attach as much importance to the subject as I did.

I consider it to be a great national object, the interest of which is daily increasing.

I am, Sir, your faithful Servant,

JOHN S. PAKINGTON.

Dublin, February 7th, 1853.

Dear Sir,—I have just received here the circular note of invitation to the Meeting of the Ocean Penny Postage Association, on the 8th, which you have kindly addressed to me. Most gladly should I have attended this important meeting had I been in London, or within any reasonable distance from it. But I have just arrived in this city, *en route* to all the considerable towns in Ireland, for the purpose of presenting the project of cheap or Penny Ocean Postage between Great Britain and all other countries on the globe. As I had developed this subject in public meetings in nearly all the large towns in England and Scotland, I felt it desirable that the people in this part of the kingdom should be interested in the question, which is of peculiar importance to their well-being. At the conclusion of every meeting, a petition to Parliament in favour of Ocean Penny Postage is adopted and signed. I have now presented the project in this way in about 120 of the most considerable towns in Great Britain, and it has been received with great favour everywhere. We have a large number of petitions ready for presentation to Parliament, all asking the simple boon of an Ocean Penny Postage. Mr. T. M. Gibson has agreed to bring forward a motion in the House of Commons in behalf of this measure, and Mr. Adderley has engaged to second it. I hope that your magnanimous and magnificent scheme of Colonial Postage may be harmoniously blended in Mr. Gibson's motion, so that both may be fully and advantageously included in it; so that it may be asking the establishment of an Ocean PENNY Postage between Great Britain and all FOREIGN countries, and the extension of the *present inland penny postal* system of the home country to all the Colonies and dependencies of the British empire. Thus all our operations may be concentrated upon one motion. I earnestly hope that this may be agreeable to the members of your powerful Association.

Yours truly,

ELIHU BURRITT.

Mr. Yapp then read a paper on "The Proposed Reforms suggested by the Colonial and International Postage Association," of which the following is an abstract:

There are few subjects perhaps of interest to a larger number of people than that of postage. It cannot be said to be exclusively a commercial, a literary, or a scientific question. It appeals to all classes of society, whether engaged in commerce, literature, or the arts. It appeals to our feelings as well as to our interests. It is a matter which deeply concerns the manufacturer and the merchant; and it is no less interesting to all who are united by ties of affection or sympathy to others, from whom they are parted by distance.

Facilities of communication of all kinds are sure tests of the progress of civilization, and of the development of the resources of a country. Seventy years ago the mails were carried through England on horseback, at the rate of three and a half miles an hour, and when Mr. Palmer (the Rowland Hill of that day), proposed the establishment of the mail coach system, the Post-office authorities of the time thought that the pace was quite as fast as was requisite, and could not see the use of hastening the mails.

The mail coach system, however, was established, notwithstanding the authorities, and there were few things that Englishmen were much prouder of than the mail coaches, which, a few years afterwards, ran in all directions, from St. Martin's-le-Grand.

Railways have superseded the mails, and the letter that used to be a week, or even a month, reaching the remote parts of our own country, and cost 16d., now flies there while we are in bed, and costs us but one penny.

Mr. Rowland Hill's proposal to establish, in place of the varying scale then in operation, an uniform charge of a penny for a single letter, irrespective of distance, was at first received as the dream of an enthusiast, and met with as much ridicule as applause.

The idea was new, or, at any rate, it was new to the public, and the project laboured under a difficulty, which fortunately no longer exists. No positive data *then* existed by which to test the soundness of the scheme—*now* we have the benefit of the experience which has resulted from the working of the penny postage system, and can advocate cheap and uniform colonial and foreign postage, on the grounds of the great success and immense national advantages which have followed the adoption of the system in this country.

To form any notion of the effect of penny postage, it is necessary to take a glance at the Post-office, previous to the alteration of the system.

By reference to the Third Report of the Postage Committee of 1838, it will be seen that for seventeen years previous to the inquiry, although the population and trade of the country had been increasing rapidly, the revenue of the Post-office had been nearly stationary, in fact, from 1815 to 1823, it had been on the decline; the gross revenue in the former year having been £2,323,835, while in the latter it only reached to £2,071,503.

At page 11 of the above Report is a return, showing that in seventeen years, ending with

1837, the income had only increased £60,827, or 3s. per cent. per annum.

The twelve years of the new system exhibit results which contrast remarkably with the above. The gross revenue of the Post-office in 1840, the first year of the penny postage, was £1,359,466; that of 1851, £2,422,168; an increase of very nearly £100,000 a year, and a larger total by some thousands than had ever before been obtained from postage.

To complete this slight sketch of the growth of the income of the Post-office, it must be noted that a very large proportion of the expenses of management is caused by the newspapers (amounting in 1849 to 65,500,000), which pass through the post without contributing anything to the funds of that department.

The £350,289 collected in newspaper stamps ought, in fact, to be carried to the credit of the Post-office.

It is quite impossible to exhibit by figures what cheap postage has done for the trade and commerce of the country, or to estimate the influence which it has exerted upon literature, science, art, education,—in short, upon all those great and important items which together constitute civilization.

Some idea of these effects may, however, be derived from the fact that the number of letters which passed through the post in 1838 was under 76,000,000, while last year they amounted to about 400,000,000.

But we are not confined to our own country for proofs of the importance of cheap postage. Nearly all the civilized world has followed our example either entirely or in part. France, Spain, Belgium, Prussia, Holland, and Bavaria, have all made great reductions in their postage charges. Russia has for some years established a uniform rate (equal to about 4d. of our money) over the whole extent of that enormous empire. The United States charge three-halfpence for a single letter for any distance not exceeding 3,000 miles; and we find, by the Report of the Post-master General, that the number of letters has increased from 24,000,000 in 1843, to 83,000,000 in 1850.

In our own possessions in India a reduction equivalent to about fifty per cent. was made in 1839. The effect of this reduction, as we find by the Report of the Commissioners appointed by the Government at Calcutta to inquire into the subject, was to cause an increase of the number of letters, during the first year, of 100 per cent., and in nine years of 150 per cent.

Since the establishment of the penny postage in the United Kingdom, the internal trade of this country has greatly increased; so also has our export trade, and to an extent not contemplated by the most sanguine speculators. The exigencies of this multiplied commerce have been partially met by the establishment of ocean steamers, which have practically reduced the distance, and strengthened the ties between us, our colonies, and our neighbours; and it has been for some time the opinion of practical men that the principle of low and uniform postage charges was equally applicable to ocean as to inland postage, and would, if applied to foreign and colonial correspondence, produce similar results to those which have flowed from its adoption in the former case.

With this object in view, an Association was formed within these walls in 1851, including the representatives of many foreign nations at the Great Exhibition, which had shown to enlightened men of all nations how much each could learn of the other, and of what vast importance it was to remove all obstacles to free communication.

After mature consideration of the course to be pursued, the Association, looking at the greater difficulties which stand in the way of an alteration of Foreign Postage arrangements as compared with Colonial, and feeling that example in such matters is infinitely more efficacious than precept, have resolved to give their attention for the present to that portion of the subject which relates to our own possessions abroad.

There is another and a most important circumstance also, which has helped to this decision, namely, the extraordinary emigration which is now carrying 1,000 of our countrymen daily from our shores to the antipodes:—such a migration is without parallel in history, and the growth of the Colonies towards which this vast tide of human beings is directed, is equally unprecedented.

A colonization so unparalleled calls for extraordinary means of correspondence, and nothing can be of more importance in cementing the interests of the Colonies and the mother country than such a postal system as shall make the cost of a letter no impediment to its being sent upon the most trifling occasion, not only by the merchant or tradesman, but by the poorest emigrant just landed on the Australian shore, or by the anxious mother, wife, or sister of him from whom the ocean separates them for a time, or even perhaps for ever.

At present, the postage on a letter to our foreign possessions varies from 8d. to 1s. 10d., the average being about a shilling. There are two rates to each Colony, according to whether the letter be sent by private ship or by packet; in some cases the letters must be prepaid, in others it is optional; while from some of the Colonies letters cannot be prepaid under any circumstances; and lastly, there is this vexatious fact in addition, that, whatever the charge here, a writer knows not how much his correspondent will have to pay before the letter will be given up to him.

The printed accounts relative to colonial, as distinguished from foreign letters, are very unsatisfactory; but it may be seen by a statement obligingly furnished by the Postmaster-General, and printed in the Journal of this Society, of the 10th of December, and especially by reference to an extract from that Report, published in the same Journal on the 14th of January, that the total gross income from colonial correspondence is less than 200,000*l.* per annum: thus, supposing the average postage to be one shilling, we have less than 4,000,000 of colonial letters, or a hundredth part of the total number of letters passing through the Post-office during the year. That these are all the letters that pass annually between the United Kingdom and the whole of the British possessions abroad, India included, is quite incredible; it is perfectly well known that the number of letters which are conveyed to the Colonies by

other means is very considerable, amounting, according to some estimates, to four times as many as go through the Post-office.

That the postage should be reduced, and a remedy found for the anomalies, inconveniences, and evasions which exist, is admitted by every one, although there will doubtless be some diversity of opinion as to the exact plan to be adopted.

But the satisfactory results of the Inland Penny Postage system would seem to point at once to the adoption of a *very low uniform* rate, together with *pre-payment*, or, in other words, to *Colonial Penny Postage*, and the use of *stamps*, as in the United Kingdom.

If it be objected, that it would be unjust to charge the same for a letter going to Australia as for one going into the next town, or even into the next street, the answer is, that it is quite impracticable to arrange the charge in exact proportion to the distance travelled and the duty performed; that the extra cost incurred by distance is so small as to be scarcely appreciable, while the preparation of the mails and the delivery of the letters is the same in all cases; that the proposed rate of one penny per half-ounce would be equal to 300*l.* a ton, supposing all letters were full weight; and lastly, that the simplicity of a uniform penny rate would be of such great practical importance, as to outweigh all other considerations.

Such a rate of postage to the Colonies would not be without precedent. From the year 1819 to 1838 the postage to Ceylon, Mauritius, the East Indies, or the Cape of Good Hope, by private ship, was only twopence per letter, up to three ounces in weight.

And it must not be forgotten that books, pamphlets, and even MSS., can be sent at the rate of 6*d.* for 8oz., to nearly all our Colonies, while a 2oz. pamphlet, or a newspaper of any weight, can be sent to the United States of America for 1*d.*

In the discussion of this subject frequent reference is made to the fact that Government expends upwards of 800,000*l.* a year for the packets in which part of the ocean mails are carried; and it is argued, that therefore a lower postage is not advisable on financial grounds. It is well known, however, that the subsidies are paid for other very important objects besides the conveyance of the mails, and consequently the whole cost of these packets is charged by Government, as it ought to be, not to the Post-office account, but to that of the *Admiralty*. If the packets were maintained solely for the purposes of the Post-office, the sum of 240,000*l.* per annum would certainly not be paid for the West Indian packets, which do not, and could not have been expected to earn more than a tenth-part of that sum.

In a financial view the point to be considered is, how would the proposed alteration affect the *actual income* from Colonial letters. That has already been stated as being less than 200,000*l.* per annum, just equal to the increase in the net income of the Post-office in 1851, as compared with 1850. This is the whole amount that could possibly be endangered by the change.

The Author then entered at length into the reasons why a Colonial Penny Postage should

be established, and said, in conclusion:—Looking at all these facts, is it fair to suppose that the amount of colonial postage would be reduced one half? And that sum is less than the average annual increase in the general income of the Post-office for the last thirteen years; and therefore such a reduction could not be looked upon as an actual sacrifice of revenue, but only, at the most, a temporary check to a rapidly growing *increase* of revenue.

Besides, it must not be forgotten, that revenue is not the main object of the Post-office. For, in the words of the Commissioners of Post-office Inquiry, "The safe and speedy conveyance of letters for the benefit of trade and commerce, was the primary consideration with the Government in the establishment of the General Post-office."

This also was the reasoning of the Committee of 1838, and the adoption of Penny-postage was the result.

Is not the demand for a Penny Colonial Postage equally logical and practical, when it is seen that its establishment could not possibly cause any reduction of the present net revenue of that department?

Sir J. BOILEAU pointed to the advantages which had resulted in this country from the establishment of penny postage. Formerly, he said, when the children of the poor were sent to service, 100 or 150 miles from their homes, so high was the rate of postage, that they did not think of keeping up a regular correspondence with their parents. The small amount of education which they had received they gradually lost, and in a few years they lost all those domestic affections which, after all, were the root of the moral virtues. Cheap postage tended very much to foster and spread education amongst the masses.

Mr. MOFFATT, M.P., said, the original intention of Mr. Rowland Hill was, that the penny postage system should apply to the Colonies as well as to the United Kingdom; but as it was supposed that the opposition to postage reform would be diminished by limiting its object to the United Kingdom, agitation for reform, with regard to the Colonies, was postponed. The results of the establishment of the penny postage system for the United Kingdom were a great triumph for Mr. Rowland Hill, and ought to urge all to support the efforts of this Association to extend the benefits of a cheap and uniform rate of postage to the Colonies. Under the present high-priced system, the number of letters reaching us from India and the whole of our Colonies in a year was no more than passed through the Post-office at home in a week. As a mere matter of policy, we ought to reduce the postage to our Colonies, in order to give free scope to the feelings of affection entertained by the emigrants to those Colonies, and the relatives whom they had left in this country. That would be amongst the most effectual means of binding the Colonies to this country. England had set an example to the whole civilised world with regard to the postage system; and it behoved her to be consistent, and carry out her postage reform to the utmost extent. Mr. Moffatt concluded by moving the following resolution:

"That it would be sound national policy to abandon, if necessary, even the whole of the present postal revenue derived from the Colonies and the British possessions, which is about 200,000*l.* per annum, in order

to promote the commerce, education, freedom of communication, and friendly relations between the Colonies and the mother country."

CAPTAIN OWEN, R.E., seconded the resolution. He said that the three great principles which should guide the Postage Association were, *pre-payment, uniformity, and cheapness*. He warmly advocated the adoption of uniform penny postage to all our possessions abroad. As to the proposed rate of one penny for a letter to any of our colonies, he said: At the present moment, the freight to Australia was 15*l.* per ton. It was thus high, no doubt, in a great measure, in consequence of the scarcity of seamen. Now, 70,400 half-ounce letters only amounted to a ton, and at the rate of 15*l.*, the freight on each letter would be no more than a twentieth of a penny. This, he thought, disposed of the objection that it was absurd to ask the Government to carry a letter to Australia as cheaply as to any part of the United Kingdom.

Mr. SAMUEL SIDNEY supported the resolution; he believed that the present Government would not be unfavourable to the establishment of cheap and uniform ocean postage, provided they were assisted by a little gentle pressure from without.

Mr. FOSTER (of Port Phillip), said he was of opinion that it was of the utmost importance to the safety of this country that a copious stream of emigration should continually flow from her to her colonies. The surest means of sustaining that stream would be to afford to the poorer classes of this country means of being informed of the great advantages they might derive from emigration to the colonies. He thought it desirable that a communication should be entered into with the colonial governments upon the subject which they had met to consider that evening. It was as much for the advantage of the Colonies that a cheap system of postage should be carried into effect as it was for the mother country, and he felt assured that they would gladly aid in the promotion of so desirable a project.

After a few words from Mr. Collett,

The first resolution was put by the Chairman, and unanimously adopted.

Mr. J. D. POWLES, in moving the second resolution, said our fellow-countrymen in the colonies had a right to call upon us for an answer why we had not permitted them to participate in the advantages which we at home had enjoyed from the penny postage reform. The resolution which he begged to move ran as follows:—"That the system of a uniform penny postage already in operation between the United Kingdom and the Channel Islands ought to be extended to the British colonies and possessions." It was the interest of England to bind her distant possessions to her as much as possible, and he knew no better mode of effecting that object than by carrying into effect the resolution which he had the honour to submit to the consideration of the meeting.

Mr. JOHN DILLON seconded the resolution. He thought that the time had come when a cheap and uniform rate of postage should be extended to our colonies. The immense flow of emigration to Australia ought at once to settle this mooted question. It was impossible that the immense mass of our fellow-countrymen in that colony could long be left without a rapid, immediate, cheap, and uniform postage.

Mrs. CHISHOLM having been solicited to say a few words, was received with great cheering, and addressed the meeting, stating that she knew from her own experience how desirable it was that a cheap system of postage should be established between the colonies and the mother country. She believed such a system to be indispensable if the social affections were to be che-

rished, and in support of her opinions adduced several instances of persons in the humbler ranks of life who had emigrated to Australia, and who had, in consequence of the heavy rate of postage, found themselves unable to communicate with their friends in this country.

The resolution was then unanimously adopted.

Mr. BROOKING moved, and Mr. GILLESPIE seconded a vote of thanks to Mr. Yapp, which was carried unanimously.

The Secretary announced that at the next meeting, on Wednesday, the 16th, a paper would be read by Mr. J. Sparkes Hall, "On the History and Manufacture of Boots and Shoes."

PHOTOGRAPHIC SOCIETY.

At the First Meeting of the Photographic Society held on the 3rd of February, Sir William Newton in the chair, the following paper was read:

We have now formed a Photographic Society with a sufficient number of members to form a good working body; it remains to render it really efficient for the purposes for which it is constituted. To attain this end, it will be useful to have a clear notion of what a Society can, and what it cannot do. It cannot then of itself advance the knowledge of the art, but it can afford a means by which its individual members may the more easily do so. It is the organised machine, but not the motive power. It can give direction and discipline to previously existing forces, and a nucleus to those which may hereafter arise.

It cannot of itself, therefore, enter into photographic researches, but it can regulate, and to some extent initiate the labours of its members; it can receive and record the results of those labours.

One of its simplest, but not least important offices, will be to define what is already known. In the works which at the present time treat of photographic subjects, our attention is constantly attracted by the announcement of new discoveries which, on enquiry, turn out to be old. There being no recognised record to which students may refer, to ascertain what has been already done, they are continually re-discovering the same facts, and wasting time in the working of unprofitable veins of ore. Next, it will be a register of all new facts, and herein will consist much of its value.

Photographers are constantly meeting with accidental results, sometimes spoiling, sometimes improving their pictures; in each case, independently of any plan on the part of the operator. The person to whom these occur may and will in the majority of cases be unable to trace out the causes of such apparent accidents, but he can always make a simple statement of the circumstances under which they occurred; and so, perhaps, lay the foundation of what, in the hands of another member of the Society, may become an important discovery.

It will then be one of the great objects of the Society to get together a collection of extensive and careful observations. No doubt we shall be able in a short time to present to the attention of photographers a table of subjects upon which minute experiment is much needed for the advancement of the art.

The more varied the conditions under which these experiments are made, the more instructive and useful will be the results, and therefore it will be the especial aim of the Society to keep up a constant intercourse between itself and those of its members, who may be pur-

suings the practice of the art in distant quarters of the world.

That this class of members should be as numerous as possible is esteemed exceedingly desirable. The Council has therefore resolved that gentlemen residing abroad, and wishing to be members of the Society, shall pay no more than the entrance fee and subscription for the first year, remaining free from any other liability whilst absent from this country.

The principal objects of the Society being the collection and the diffusion of information, the verification and explanation of new discoveries, the comparison of processes and of their results, the improvement of the mechanical and optical machinery of the art; their meetings will be organised, and their exertions directed in such a way as best to secure these results. With this end in view, it will be advisable to divide the art into sections, and to apportion each section to the consideration of successive ordinary meetings.

Thus on one evening we may take for consideration the different processes by which photographic pictures are produced; or if too extensive a range of subject is here included, we may single out any one process, and obtaining from some member distinguished for his successful application of that process, a minute account of the method of manipulation, a statement of its advantages and disadvantages, with the means adopted to avoid the one and secure the other, proceed next to the discussion of the subject, and to receive the additional experience of those who have studied the same process.

On another evening we may consider the relation of photography to the stereoscope, and obtain a statement of the general law under which stereoscopic pictures are to be made, and the accidental conditions which render them most effective.

The different forms of camera at present in use will be a most interesting subject for examination, and one that should be brought on early, as there is none in which there is greater need of improvement.

The different forms of lenses, and the various methods of printing positive pictures, will, in their turn, be brought forward for the consideration of the Society.

If possible, the consideration of each section will be introduced by the reading by some member of the Society, of a short paper specially treating of the subject set down for the evening's discussion.

On any evening, however, the Society will be glad to receive communications referring to any part of the art or science of photography.

So far all that we have mentioned relates to the collection of information. The evening meetings will, as regards members residing in town, and able to attend regularly, serve also as a means of diffusing the information so collected. But, as a great part of our members are scattered up and down the country, no scheme of action will be complete which does not extend to them the advantages of the Society. We shall, therefore, in proportion to the means placed at our disposal, endeavour to circulate among them from time to time all that is valuable in the communications laid before the Society. A *résumé* of the proceedings of each evening will be, of course, published in all the publications which pay especial attention to scientific subjects. For the present, in addition to the general abridged report of the ordinary meetings, any interesting matter brought before the Society will be, probably, found in the columns of the *Society of Arts' Journal*. As, however, the mode in which the interests of country members will be attended to has not yet been decided upon by the Council, and will obviously depend upon the amount of

means placed at its disposal, nothing more can be said at present, than that all interesting information will be circulated among country members as fully and as frequently as possible.

When the Society is in so independent and flourishing a situation as to be able to occupy premises of its own, it will probably be considered advisable to erect a laboratory and glass-house, in which experiments may be made, either at the cost of the Society for the solution of questions interesting to all the members, or by individuals for their own satisfaction, in accordance with such regulations as may be thought necessary.

Periodical exhibitions of photographic works will, of course, form one, and an important part of the Society's means of action, and one which need not be deferred till the accumulation of a large reserve of pecuniary means.

INTERNATIONAL TELEGRAPH.

(From a Correspondent.)

It is under the above denomination that a Company has been formed with the view of constructing a Submarine Telegraph between this country and Holland. As this is the longest submarine line that has as yet been attempted, and also from its consequence, in forming a second distinct communication with the continent, independent of France, the importance of which, in the case of a war, is obvious, a short description of it may not prove uninteresting to your readers.

In all former submarine cables, where it was intended to employ several wires, they have been collected together under one coating of stout iron wire, the whole when completed bearing the appearance of an iron rope of a diameter varying from 1½ in. to 2 in. In the present instance the distance to be crossed is so great, that an entire cable containing the six wires it is proposed to lay down, would weigh above 1,400 tons, which would cause much inconvenience in the operation of laying down; from this and other reasons, the Company's Engineer, Mr. Edwin Clark, has been induced to adopt a new system, and form each wire into a distinct cable by itself: thus between England and Holland there will be laid six independent submarine cables, each of them containing one wire. The advantage of this method in the case of any accident occurring to the insulation is great, as the faulty rope can be immediately recognised, and also overhauled and repaired with facility; which, with a heavier line, if possible at all, would certainly be an operation of considerable difficulty and time. These six cables will be laid down in succession one after the other during the ensuing spring. The last four or five miles on either side, being the portion most subjected to danger, will consist of a compound cable composed of six strands of the single wire cable twisted into one; the strength and weight of which,—twelve tons per mile,—will act as a safeguard against vessels inadvertently anchoring on the line, or any mischief that may be attempted.

The cables consist of a copper wire (No. 16.), which, after receiving two distinct coatings of gutta percha, is again covered with broad linen tape, coiled round it by a machine constructed for the purpose; it is then well tarred and passed through sand; this makes a very strong and impervious protection to the gutta percha. The wire thus prepared, when dry, is further enveloped to the thickness of one-eighth of an inch in a coating of tarred yarn; and the whole is finally covered with ten galvanised iron wires, each about one-eighth of an inch in diameter, twisted round it in the usual manner.

The entire length of sea ground to be crossed is 107

miles; but each cable will be made about 130 miles long, to guard against accidents, and allow for loss in paying out. Two of the ropes are already completed, and are only waiting until the return of fine weather will permit the engineer to complete his difficult task of finally committing them to the deep. The points selected as the most favourable for the undertaking, are Lowestoft, on the coast of Suffolk, and Scheveningen, a fishing village in Holland, four miles distant from the Hague.

When this undertaking of truly national importance shall be completed, it is intended to return to this subject, and at an early period to give a detailed account of the operations.

HOME CORRESPONDENCE.

TO THE COUNCIL OF THE SOCIETY OF ARTS, ADELPHI, LONDON.

GENTLEMEN,—On the suggestion of your Secretary, I have prepared some observations upon the laws affecting Scientific and Literary Societies, which together with some suggestions for their improvement I now submit to your consideration.

The laws to which I refer, are the *Exemption Act*, of 1843; the Statutes of 39 Geo. III., c. 79; 57 Geo. III., c. 19; and 9 and 10 Vic. c. 33, in reference to *Corresponding Societies*, and the *Licensing of Lecture-Rooms*, and the *Public Libraries Act*, of 1850.

The object of the Statute of 1843 (6 and 7 Vic. c. 36), is fully stated in its title, namely, "An Act to exempt from County, Borough, Parochial, and other Rates, Land and Buildings occupied by Scientific and Literary Societies."

Much litigation has arisen upon this Act, which has to some extent narrowed its intended operation, and has suggested the necessity of amendment.

To those who are acquainted with the private history of the Act, no surprise is occasioned by the fact that some amendment is required. The framers of the Bill had no experience to guide them, there not having been any previous legislation on the subject; and it was so strongly urged by many members of Parliament as an objection to the measure, that more buildings than were intended would come within its operation, that additions which have since proved the source of much difficulty were made from time to time to the Bill during its preparation and passage through the House of Commons; and these were the more readily assented to from its promoters being wearied by a seven years' struggle against difficulties, and they were too thankful to get relief for their Institutions on any terms; and thus, like some other Acts, it contained many seeds of litigation, and became a puzzle to the Courts.

But notwithstanding the inconvenience and expense occasioned to some Institutions by litigation, it must be borne in mind that a considerable number of Institutions have been benefited. By returns made to the House it appears, that in 1844, as many as 200 Scientific and Literary Institutions were then enjoying immunity from rates and taxes; and in 1849, in addition to the foregoing, 129 other Institutions were also in possession of this boon by virtue of the Act, exclusive of those who, from alterations in their laws, obtained a second certificate from the certifying barrister, and out of the number of certificates granted to these 329 Institutions, not more than ten have been the subject of litigation in the Superior Courts.

I will now proceed to state shortly, and so far only as may be necessary to render intelligible what I propose by way of amendment, the conditions of exemption

under the Act of 1843. In order to entitle a Society to exemption, it must be instituted for purposes of Science, Literature, or the Fine Arts exclusively, supported wholly or in part, by annual voluntary contributions; must not make, nor be capable of making, any pecuniary dividend amongst its members; and must procure a certificate of the officer appointed under the Friendly Societies Act, and the buildings in question must be occupied by the Society for the transaction of its business. Each Society desiring exemption has to send three copies of its Rules to the Friendly Society Barrister for examination, and he is to examine them in order to ascertain if the constitution of the Society be in accordance with the conditions of the Act before stated; if it be, he grants a certificate on two of the copies of rules, and he returns one to the Secretary, and one to the Clerk of the Peace, retaining the third copy. If the Society shall not appear to come within the conditions laid down by the Act, it is his duty to refuse his certificate. For this service each Society has to pay him a guinea.

Provision is made for the examination and registry of new rules, which it is not necessary here more particularly to refer to.

If the certificate be refused, the Society is empowered to appeal to the Quarter Sessions against the decision of the barrister.

And power is given to the ratepayers of the place where any exempted Institution building may be to appeal to the Quarter Sessions against such exemption, within four months after any rate from which it shall be exempted.

Such is the nature of the provisions of the Act.

The chief inconveniences which have been experienced under this Act are as follows:—The want of a more definite description of the Societies to be exempted, and of *security* to a Society of its title to exemption, after the decision of a court in its favour: for by a recent decision its title is liable to be questioned after every new rate, notwithstanding it may have had repeated decisions of the Queen's Bench in its favour. Again: the modes of procedure are unnecessarily vexatious and costly; for not only is a Society liable to have its title tried at the Quarter Sessions, according to the provisions of the Act, but also before the Queen's Bench; and, as before stated, these trials may be repeated *ad infinitum*.

In order to remedy these, and other inconveniences, a new Act is necessary; and Lord Denman, in the case of *Queen v. Pocock*, expressed a hope that some amendment would be made. This subject was much considered in the year 1849, and a Bill for the purpose was prepared by the promoters of the original Bill and others, which received the sanction of all the principal Provincial Societies and some important Societies in London. Its general features had also the sanction of the late Sir Robert Peel, and of Lord John Russell, and Sir George Grey. Difficulties, however, arose, when it was submitted to the Attorney-General, which delayed the matter too late for that Session, and discouraged the parties from renewing their efforts afterwards.

In this Bill we proposed not to establish any fresh exemptions; but—

1. To simplify the means for the ascertainment of the title to exemption.
2. To lessen the cost of determining that title.
3. To render the application of the law equitable, uniform, and certain.

The mode proposed for the accomplishment of these objects will be seen by the printed "heads of proposed Bill," accompanying this letter.

It may be convenient to notice here the chief altera-

tions this Bill would make in the existing law. Our definition was—"Institutions carried on for the express, immediate, and exclusive purpose of promoting moral or intellectual improvement, the annual income of such Institutions being to the extent of two-thirds at least, derived from periodical or occasional contributions, and yielding no return in money to any of the contributors." We proposed to remove the duty of examining the claims of Societies from the Friendly-Society Officer, whose other duties have nothing in common with the duties under this Act, and to place them in the hands of an officer, to be specially appointed for this purpose. This is very important; for by the careful examination of claims, in the first instance, much litigation might be avoided.

It is provided by our Bill that public notice shall be given of every certificate, and that if no appeal be made in four months, or being made the certificate shall be confirmed, the title of the Society shall be indisputable until the certificate shall be withdrawn.

Moreover we propose, in order to check any fraud by alteration of rules, &c., to have an annual return from each Society, in the form prescribed by the Act, made to the Certifying Officer; and power is given to him to recall his certificate at any time, if by such return any Society shall appear to have forfeited its title, subject to appeal. This is essential to the carrying out of certain provisions of the Act, and it would be the means of collecting some most interesting and useful statistics relating to the Societies in question, and would tend to strengthen the union now happily existing amongst so many of them.

The occupation of any rooms by any curator or servant, as a residence, is not to prejudice the Society's title to exemption; but such rooms are to be rated as distinct tenements.

The occasional letting of lecture-theatres is declared not to disqualify Societies from enjoying the benefit of the Act, the money so received being directed to be carried into the annual return, under the head of *Endowment*, as distinguished from periodical contributions.

The officer we propose to pay by fees of 21s. for first application for certificate, and 10s. 6d. with each annual return.

This Bill, I believe, would be found to work well, and would remove all the inconveniences which have attended the Act of 1843.

It may be convenient here to notice a complaint often made by Scientific Societies, that they do not enjoy any legal recognition. It is very possible that I do not understand what is desired, or what inconveniences have suggested the complaint. If it be that they desire to possess the powers of more conveniently suing in courts of law persons from whom they have suffered injury, I would observe that those persons would in most cases be members of the Society injured, and it would be much wiser for Societies to exclude the offending member than to go to law. I do not see why the inconveniences which may have suggested the complaint, should not be provided for by the Rules of each Society.

These Societies are partnerships; and as regards their properties, are regulated by the laws affecting ordinary partnerships. If, however, it can be shown that these Societies really require other remedies than those now within their reach, the proposed Act would afford a good opportunity for acquiring them. The legal registry of such Societies there provided would facilitate greatly the obtaining increased powers, but a strong case must be made out to justify any such application, and Societies will do well to beware of too much legislation.

AS TO CORRESPONDING SOCIETIES AND THE LICENSING OF LECTURE-ROOMS.

By 39 Geo. III., c. 79, every house in which lectures shall be delivered, or public debates held; or which shall be used as a place of meeting for reading books or newspapers, and to which the admission shall be for money or by ticket, is declared to be "*a disorderly house*," unless licensed annually by Justices of the Peace; and pecuniary penalties of 100*l.*, and 20*l.*, are imposed on all persons who lecture, debate, or attend by payment of money, in such houses, or who supply books or papers to be used there; and power is given to common informers to sue for such penalties.*

Powers are given to Justices of the Peace to demand admittance to houses used for any of the purposes before-mentioned (and if refused admittance, the house is declared a disorderly house); and also to suspend licences granted by them, if lectures, debates, or books shall be deemed of a seditious or immoral character.

Houses licensed "*for the sale of ale*,"—the Universities, Inns of Court, and Gresham College are exempted from the foregoing provisions.

The Statute also declares that every Society composed of different branches acting in any manner separately or distinct from each other, shall be deemed to be an unlawful combination, and every member of it, and every person having correspondence or communication with it shall be guilty of unlawful combination.

The 57 Geo. III., c. 19, sec. 25, enacts, "That every Society or Club that shall elect, appoint, nominate, or employ any Committee, Delegate or Delegates, Representative or Representatives, Missionary or Missionaries to meet, confer, or communicate with any other Society or Club," &c.; "or to induce or persuade any person or persons to become Members thereof, shall be deemed to be unlawful combinations;" "and every Member or correspondent of any such Society is to be deemed guilty of unlawful combination."

It will, perhaps, be scarcely credited by some, that these Statutes are now extant, and form part of the law of the land; but it is too true that they are now in full force.

That such is the case, will be obvious by the Statute to which I shall have occasion next to refer. Others will probably say that they do not apply to any other than *political* Societies, and that the titles of the Acts show this. It is true that these titles mention only "*Seditious*" and "*Treasonable*" Societies; but that the Acts have unfortunately a much wider operation is proved by some of the clauses to be found in the Acts themselves; for there are clauses declaring that these Acts shall not extend to "any Meeting or Society of the people commonly called Quakers, or to any Meeting or Society formed or assembled for the purposes of a Religious or charitable nature only, and in which no other matter or business whatsoever shall be treated of or discussed;" (Sections 26 and 27 of 57 Geo. III., c. 19). These exceptions would not have been necessary, if only the Societies described in the title had been included.

These statutes were passed in the troublous years of 1799 and 1817; when those times passed away, and it became unnecessary to call their great powers into exercise, the Acts were forgotten; or if thought of, were deemed as having had, as some parts of them in truth had, only a temporary existence. From this happy ignorance the public was aroused by the following case:

* 36 Geo. III. c. 8, contained similar provisions, but they were limited to three years.

On the 14th of September, 1844, a Lecture was delivered in Hull, on Christian Missions, which gave great offence, and an information was laid against one Richard Johnson, for acting as money-taker at the door of the lecture-room; and he was convicted by the magistrates in the penalty of 20*l.*, under 39 Geo. III., cap. 79: and this conviction was confirmed by the Queen's Bench.* Upon this (namely, in 1846) a Bill was introduced into the Commons by Mr. Duncombe, Sir D. Lacy Evans, and Mr. Aglionby, setting forth the clause under which Johnson was convicted, and also the other clauses to which I have referred; and then declaring them to be repealed. A clause was added, that no penalty of the Acts referred to (for they created many other offences and penalties) should be sued for by any common informer; thus in effect giving to the Attorney or Solicitor General in England, and Her Majesty's Advocate for Scotland, the sole power of proceeding to enforce the unrepealed penalties of the Acts.

Unfortunately this Bill was not passed, the Attorney-General considering it more prudent to retain the powers. I prepared a clause which I thought was very unobjectionable, to the effect that the Acts should not extend to societies which should pass through the ordeal of the Exemption Act of 1843: but this found no favour with the Attorney-General; he struck out of the Bill all the clauses, save that limiting the power of suing for penalties, to the Law-officers of the Crown, and all that was permitted to remain now forms the Statute of 9 and 10 Vict. c. 33, which is called, "An Act to amend the Laws relating to Corresponding Societies, and the Licensing of Lecture-rooms."

This Act, be it observed, does not relieve our societies from the penalties and opprobrium of illegality created by the "treasonable" Acts, but simply removes the instrument for our punishment from the hands of the common informer, and leaves it in the sole care of the Law-officers of the Crown. I am quite aware that this was a great improvement, and that there is no real danger to be apprehended; but shall it be said that the British Association, our learned societies, and other important educational institutions, shall be stigmatised as "unlawful combinations," and their halls and places of assembly be branded as "disorderly houses?" and yet so long as these statutes remain extant, what society is there that does not come within their denunciations and penal clauses?

I do not believe that any Government would refuse their sanction to the repeal of these statutes in respect to scientific and literary societies. This might be easily accomplished by a clause added to the Bill before recommended, declaring that every society which should possess a certificate of the Certifying Barrister, should be exempted from the operation of the statutes in question; but a better thing would be a total repeal of the clauses referred to.

The *Public Libraries Act*, 1850, requires amendment in several important particulars. It is too confined in its objects, and the machinery for effecting these is bad. We are greatly indebted to Mr. Ewart and his friends for this important advance upon former legislation; and it was, I am aware, the best Act they could induce the House of Commons then to sanction. But although not three years have elapsed since the date of this Act, public opinion on all matters connected with the diffusion of education has since that time made so great a stride, that Parliament would probably now be willing to extend the powers then rather grudgingly bestowed.

The powers of the Act are not co-extensive with its

* The Queen v. Johnson, 22 B. Reports, p. 102.

title; if they were, I should have but little to suggest. The title is, "An Act for enabling Town Councils to establish *Public Libraries and Museums.*" The power which it gives to Town Councils is to acquire *buildings* for public libraries and museums; not one farthing can they expend in the purchase of those things without which those buildings would be useless. The only things on which they are enabled to expend money, are, "fuel, lighting, fixtures, furniture, and other similar matters."

The amendment I have to suggest on this point is, that Town Councils should be empowered to purchase books, maps, and the productions of art and science, and also to provide lecture-rooms, reading-rooms, and laboratories; and to allow the use of these rooms or laboratories to such societies as should possess a certificate from the Certifying-officer of Scientific Societies; provided also, that such societies should admit gratuitously to their lectures and classes a certain number of persons to be nominated by the Council; and I would require the Council to select as their nominees operatives who should have distinguished themselves by their progress in scientific knowledge in some or other of the educational institutions in the town, the judges of such progress being examiners so appointed as to ensure competent men for the office.

I think Town Councils should have the power of granting an annual educational rate, for the purpose of providing instruction in practical science and natural philosophy, so as to facilitate the education of the operative classes in large towns in the principles connected with their various occupations. This may perhaps be considered too great a subject to be taken up now. The difficulties which would attend it, and which might alarm some, I am sure might be surmounted, if the object should be really desired by any considerable number of earnest men.

I will now proceed to the machinery which the Library Act provides for its limited object. The Town Council must first move the Mayor, and then he may invite the burgesses, to send in voting papers, saying "aye," or "no," to the question, "shall the Act be adopted?" If two-thirds of the burgesses who send answers to this invitation say "aye," the Council may levy an annual rate of one halfpenny in the pound for the acquisition of buildings, and finding fuel, &c.; but if the votes for the Act should fall short of this number of two-thirds, then not only is the Council unable on that occasion to proceed under the Act, but the question cannot be mooted again in that borough for two years.

I contend that this mode of voting, and the proportionate number of votes required, are wrong in principle and inconvenient in practice. I would give the Council the power without any voting by the burgesses; but if this cannot be accomplished, the voting should be preceded by an assembly of the burgesses in public meeting; without this, the voters have not the means of understanding the matter in issue and are very much at the mercy of unscrupulous people, to be found in every borough, who for the sake of the popularity so easily gained when *economy* is the cry, do not hesitate to retard most desirable improvements. Again, I would make the majority, instead of two-thirds of the votes taken, decisive; I know no good reason for departing from the principle sanctioned in the highest assembly in the kingdom upon the most momentous questions.

To conclude; I would respectfully yet earnestly urge upon the attention of your influential Society, the importance of obtaining two Acts of Parliament; one which should substitute for the Exemption Act of 1843,

the provisions sketched in the "Heads" accompanying this Letter, with the addition of a clause repealing the Statutes of 39 and 57 Geo. III., so far as our Societies are concerned: the other, substituting for the Public Libraries Act, enactments giving extended powers to Town Councils to found public Libraries, Museums, Lecture-Rooms, and Laboratories; and, if practicable, to provide instruction in practical Science and Natural Philosophy, for the industrial classes.

These Acts would of course be *Public Acts*, and consequently the application for them would not occasion any expense beyond such as would be incurred in printing, stationery, &c.

If I should be so happy as to induce your Society to take into your consideration the subjects on which I have ventured to address you, and not without a painful consciousness of my inability to do justice to them, I doubt not you will devise some provisions much better calculated for the ends in view than those I have submitted; and I am sure you will succeed in accomplishing whatever you may determine upon as desirable.

I am, Gentlemen,

Your obedient Servant,

ARTHUR RYLAND.

BIRMINGHAM,

24th January, 1853.

IMPROVEMENTS IN FIRE-ARMS.

SIR,—It was with much regret that I was obliged to leave the meeting on Wednesday last, before the discussion on Mr. Wilkinson's paper on fire-arms was terminated. It is desirable that one or two points should be mentioned on the subject, both as regards the information and the practice contained in them. The very serious expense of making hasty changes, more particularly before the value of such change is thoroughly established, is not to be forgotten among the causes of delay in adopting improvements. The change from the old flint musket was happily hastened by selling a large number (50,000 stand, it was said) of the old pattern to the Spanish Government for their civil wars; while the final clearance was effected at the burning of the Tower. The former lot may be seen to this day, not only in Spain, but scattered over South America. It is not every government that will buy a bad article; and the Tower is not so accommodating on ordinary occasions. If such a blessing could occur to the stores at Woolwich, the service would be benefited, for we hardly expect the economical idea of burning the useless stores *outside* the buildings to be adopted. Delays in improvement cannot be charged on Government alone. In the year 1843, I asked one of the most eminent rifle-makers (I will not mention names), to make me a double rifle, two-grooved, of 2 feet 2 inches barrel, with "a quarter of a turn;" i.e., one in about 9 feet. He strongly remonstrated; but this is about the amount now strongly recommended by Mr. Wilkinson.

The main cause of the bad shooting is not chargeable on the weapon. Nelson was killed with a smooth bore especially aimed at him. It is the confusion, the smoke, and inability to see the object; to say nothing of the peculiar whiz of a bullet close to your own ear. The case of the Kaffir war proves nothing. I know an occasion when 22,000 rounds were fired and one man killed. What then? the question is, how many were *aimed* at any thing, or person. Not more than three Kaffirs were seen. This may be a waste of ammunition, but not a single shot was *aimed*, and this was not the fault of the weapon. But there is another cause of bad shooting, and this is a matter deserving of consideration with amateur riflemen. In the army it is sadly neglected.

A light infantry soldier or rifleman has frequently to change his position very rapidly and to run very fast from point to point; and to fire steadily after such exertion requires amazing practice. The "Chasseurs de Vincennes," are regularly trained to run and fire. They have to practice running a mile, sometimes alone, sometimes alongside a horse soldier and holding his stirrup. About twenty in every 100 can stand the necessary training, the rest are drafted to the line. We have nothing that can compete with them.

Lastly, it should be known that the improvement suggested by Mr. Wilkinson is already attained *more perfectly* by our "rifle musket," where the conical ball, with the hollow end made thinner, is used *without the cup*, and succeeds perfectly. The opinion at Woolwich is by no means generally in favour of Mr. Wilkinson's improvement.

Yours, &c.,

F. E. W.

COMMUNICATION BETWEEN THE GUARD AND ENGINE-DRIVER.

DEAR SIR,—In addition to the simple contrivance of Mr. Whishaw's, in the last Journal, p. 127, if you would suggest to all Railway Companies that which I adopted upon the Eastern Counties Railway, and have urged upon the Directors of many others, namely, fixing a small looking-glass immediately in front of the engine-driver, he would be able to see all that was passing behind him.

At night I used coloured lights, *white, green, and red*, when necessary for the guards to communicate with the engine-driver.

JOHN BRAITHWAITE.

PROCEEDINGS OF SCIENTIFIC SOCIETIES.

ROYAL SCOTTISH SOCIETY OF ARTS.—The Society met in their Hall, 51, George-street, on Monday, 24th Jan., 1853, at eight o'clock, P.M., Robert Ritchie, Esq., Assoc. Inst., C.E., Vice-President, in the chair. The following communications were made:—"On the adaptation to every day practice of the Capillary Tube method of preserving Vaccine Lymph," by William Husband, M.D. and A.M., Edinburgh. The author exhibited the tubes, and described the manner of using them, pointing out that the peculiarity of the method, as modified by him, consisted in its perfect simplicity, and in the extreme facility with which the manipulations connected with it were performed. He stated that in these respects his tubes differed essentially from every other form of tube hitherto described; and referred, in confirmation of this assertion, to the accounts given of the capillary tube method by the highest English and French authorities up to the present day. The author recommended his tubes, not as supplementary to the common methods—such as the square pieces of glass—but as a substitute for them. He contended that these methods ought to be abandoned, and the tube method, as modified, adopted in their stead, on account of its extreme simplicity and manageableness, and because it furnished a really efficient means of preserving vaccine lymph for future use. He stated that he anticipated ere long the universal adoption of the method in question by the medical profession, both in civil and military practice, and the consequent entire cessation of the present system of borrowing and lending lymph, with all its attendant annoyances and evils; and that he was prepared to demonstrate that

the necessary result will be a great mitigation of the ravages of small-pox, and a great saving of human life. "Description of a Stop-Cock, with India-rubber Tube and improved action." The next paper read was by Mr. J. Robb. In this invention, the outer case is of cast iron; and by the use of vulcanised India-rubber tubing, leakage is prevented. The last paper read was a "Description of an Elastic Self-adjusting Castor, applicable to Furniture, Musical Instruments," &c., by Mr. J. Robb.

ROYAL INSTITUTION, Albemarle-street, Feb. 7.—A General Meeting of the Members was held this day, W. Pole, Esq., F.R.S., Treasurer, in the chair; when Thos. W. Allies, Esq.; J. Bell Brooking, Esq.; John Foster, Esq., F.L.S.; John Henderson, Esq.; and Thomson Hankey, Esq., were elected members. Thanks were voted to Professors Faraday and Williamson, and to the Astronomer Royal for their discourses on January 21st and 28th, and February 4th, abstracts of which will shortly be issued to the members.

PROCEEDINGS OF INSTITUTIONS.

CARLISLE.—On Tuesday, the 1st inst., the Rev. D. R. Lonson, M.A., delivered an interesting Lecture to the members of the Mechanics' Institute, "On the Geology of Carlisle and of the Great Plain of Cumberland." The lecturer traced the boundary line of that great plain, commencing at the mouth of the Nith, returning along the bases of the northern and eastern hills, as far south as Brough and Kirkby Stephen; from thence coming northward again to Penrith, and curving round the foot of the Caldbeck and Brocklebank Fells to Maryport. He referred to the unaltered state of the surface of the plain during all the historical period, and from old Norman and Danish names of places, from Roman works and Celtic monuments. Stripping off the thin green rind of soil, he showed the great floor of new red sandstone rocks lying below, accurately coinciding with the boundaries already described, and in truth constituting the plain. Explaining the nature of this rock as having been a deposit from water, he then showed that the plain of Cumberland was the bottom of an ancient sea, or, more properly, of an ancient frith—an arm of a great ocean, which at that time covered the greater part of England. He then gave some account of the general appearance of sea and land, and, from fossil remains and fossil footmarks, described the plants which grew upon its shores, and the animals which inhabited its depths. He stated the relation of the new red sandstone formation to other geological formations, and concluded by showing that all these were but a small part of a still greater history of the plain of Cumberland, written in other and deeper formations that lay below it.

CRIEFF, PERTHSHIRE.—The annual soirée of the Crieff Mechanics' Institution took place on Thursday evening, January 27th, in the Freemasons' Hall. The chair was occupied by Dr. Gardner, President of the Institution. The following addresses were delivered after the opening address of the President, namely, "The Influence of Mechanics' Institutions," by Rev. J. Cunningham; "On Savings Banks," by Rev. J. Martin; "On Life Assurance," by Dr. Fairless; "On the Education of Youth," by Rev. F. M'Alister; "On the Benefits of Reading," by Mr. William Thomson; "On the Progress of Knowledge in the Nineteenth Century," by Rev. William Ramsay; "On the Economising of Time," by Rev. John R. Omond. During the evening, Mr. R. Smith (formerly of the Polytechnic

Institution, London), explained and exhibited the working of his own, and other electro-chemical printing telegraphs, and also his powerful electro-magnet, which was exhibited for some time in the Polytechnic Institution, and there supported a weight of three tons. The proceedings were further enlivened by the services of Mr. T. M. Hunter, vocalist, who sang a variety of his favourite songs, with accompaniments on the pianoforte, and a couple of songs, composed for the occasion, were sung by the author, Mr. P. Allan, and copies of the same distributed amongst the audience. The Institution is progressing favourably, the number of members has doubled this last year, the library has received a large increase of books, and popular lectures are delivered every second week to the members and the public at large.

HOLMFIRTH.—On Wednesday evening, the annual soirée of the Mechanics' Institution took place, when Mr. Cobden, M.P., for the first time addressed the inhabitants of Holmfirth. About 600 persons took tea together in the Wesleyan school-room, and afterwards adjourned to the Town Hall, where the speeches were delivered. The assembly included all the leading inhabitants of the neighbourhood.

OLDHAM.—On Monday evening the annual meeting of the members of the Lyceum took place in the courtroom of the Town Hall, Mr. James Platt, the President of the Institution, in the chair. The first business was the election of the following gentlemen as directors for the ensuing year:—Messrs. W. Bodden, S. Buckley, B. Clegg, R. Cooper, T. Emmott, H. Gregson, T. Hanson, W. Hoyle, W. Ingham, F. Jackson, T. Jackson, W. Knott, J. Lees, J. Lees, G. J. Murray, N. Marsden, J. Newton, R. Ogden, S. Riley, H. T. Robberds, A. Stott, J. Taylor, W. Tweedale, J. West.—The Annual Report was read by Mr. Taylor, the Secretary, and Mr. Buckley read the financial statement, which showed a balance of 30*l.* in the hands of the Treasurer, which it was determined should be spent in purchasing books for the library. The President said that he felt great pleasure in congratulating the members of the Institution on the position of their finances; but they all felt that, however gratifying such a fact might be, there was something more requisite, and that the time had now arrived when an effort must be made in behalf of a new Lyceum. Most of them were probably aware that it was proposed shortly to have a great gathering of the friends of education, for the purpose of raising subscriptions to erect a new building; and in order to give the matter a practical turn, and to induce others to support them liberally, he promised to give 100 guineas, provided that a sum of not less than 1,000*l.* to 1,500*l.* was raised from other sources.

ROYSTON.—The members of the Mechanics' Institute held their General Annual Meeting on Monday evening, 31st January; John Fordham, Esq., in the chair. The Secretary, Mr. John Warren, read the report, from which it appears that the number of members and subscribers was 213, being thirty more than the in year 1851. The income derived from the subscriptions of these members and subscribers was 42*l.* 6*s.*, exceeding that of the previous year by the sum of 4*l.* 11*s.* The sale of non-subscribers' lecture tickets amounted to 30*l.*; in 1851 a similar sale produced only 14*l.* 14*s.* 6*d.* The total income of the year (not including the balance from the previous year), amounted to 96*l.* 3*s.* 3*d.*; that of 1851 amounted to 84*l.* 14*s.* 10*d.* The Committee of Management for the year 1853 was then elected; and after having voted thanks to the Chairman and Secretary, the meeting broke up.

SOUTHAMPTON.—The annual soirée of the Polytechnic Institution took place on Tuesday week, on which occasion the Victoria Rooms were crowded with a highly respectable audience, who enjoyed themselves right heartily throughout the evening. The chair was taken by the Mayor of Southampton, J. Lankester, Esq. His worship opened the proceedings in a brief but appropriate address, in which he observed that he deemed it to be his duty as chief magistrate to assist in every movement which might aid the commercial, social, religious, or political advancement of the town. Addresses on appropriate sentiments were afterwards delivered by Messrs. H. Norrington, T. Falvey, J. C. Cox, W. Weston, and Alderman Andrews; and Mr. W. Wakeford, one of the Secretaries, gave a few particulars relative to the present state of the Institution, which is in a very flourishing condition. On Wednesday evening a lecture was given by Mr. D. Mackintosh, on "The Nebular Discoveries of Sir John Herschel and Lord Rosse."

SUDBURY.—On Friday evening, the 21st ult., Mr. Rouse delivered a very interesting lecture "On Astronomy" to the members of the Literary Institution. The lecturer, although a working man, appeared fully to understand the subject, which was well illustrated by diagrams, and was listened to with much attention by a numerous audience.

YARMOUTH.—The Committee of the Yarmouth and Southtown Institute have published their Annual Report, by which it would appear that the past year formed an important epoch in the history of this Institute, and that it was with no common feelings of pleasure and satisfaction they were enabled to address the members in terms of sincere and hearty congratulation. The Society has been in existence eight years, and it was believed that at no former period had it displayed such healthy and vigorous action, nor given greater promise of a long and extended career of usefulness. There had been a large accession of new members, and the total number of subscribers had been much greater than during any previous year.

MISCELLANEA.

SCHOOL OF DESIGN.—It is stated that the necessity of at once completing the new buildings at Somerset House now erecting for the Inland Revenue Offices, and of consolidating the public offices on that site, has induced the Government to determine on the immediate removal of the School of Design from Somerset House. The opportunity, it is said, will now be seized of effecting a public improvement, which will greatly increase the usefulness of the School. Instead of having but one Central School of Art for the whole of the Metropolis, arrangements in concert with local authorities will be made, to carry out the wishes often expressed, of establishing district Schools in several parts of London. The improvement will not stop here, as facilities will thus be created of teaching Elementary Drawing in any parochial schools which may desire to have it. The few students in the higher stages of instruction at Somerset House will be removed to Marlborough House, where they will be enabled to participate more largely than at present in the means of education afforded by the Museum, Library, and other features of the Department of Practical Art.

STRAW PAPER.—This manufacture was first introduced about fifty years ago, but was only partially successful. By an interesting and important improvement in the mode of preparation, the use of straw as a material for paper may now be considered permanently established in England, Ireland, and the United States. So little difference is perceptible between rag and straw paper, that the latter is used by one of the London journals regularly. One peculiar feature of the manufacture is, that although the article can be produced at a price not exceeding that of ordinary printing paper, it is applicable for both writing and printing purposes.

VILLAGE LIBRARIES.—An itinerating village library, formed in accordance with the suggestion thrown out at the last meeting of the Yorkshire Union of Mechanics' Institutions, has recently been established under the munificent patronage of the Earl of Carlisle, in Slingsby, Coneythorpe, Bulmer, Wilburn, and Coxwold,—some of the neighbouring villages have also expressed a desire to join in supporting it. A lending and reading library has also just been formed in Windsor Great Park, under the sanction and patronage of the Prince Albert, who has permitted the appropriation of his rooms in Cumberland Lodge for the purpose. The subscription is fixed at Two Shillings per annum.

MUSEUM OF ORNAMENTAL ART AT MARLBOROUGH HOUSE.—The numbers attending during the month of January were as follows; 11,751 persons on the public days admitted free; 624 persons on the students' days, and admitted as students, on the payment of 6d. each, besides the registered students of the classes and schools.

TO CORRESPONDENTS.

Notice.—Members, and others, who can furnish or obtain original information or suggestions on the subjects included in the Society's Premium-list, or other topics connected with the Society's various departments of operation, are invited to communicate the same to the Secretary, in as condensed a form as possible, for the purpose of being either read and discussed at the evening meetings, or inserted in the Society's weekly Journal. Anonymous letters cannot be attended to. All communications, whether the author's name is to appear or not, must be accompanied by the writer's name and address.

Country Institutions.—Correspondents who are so good as to send reports of proceedings of Local Institutions, are requested to forward them immediately after the Meeting to which they refer, and not later than Tuesday morning, if intended for insertion in the following Friday's Journal.

A neat Case, for holding the Numbers of the Journal for half a year, is now ready, and may be had of the Publisher, 186, FLEET-STREET, price 1s. 8d.

QUESTION FROM CORRESPONDENT.

Varnish.—Can any correspondent inform me how to prevent mastic varnish from *chilling* by exposure to the atmosphere? I find that the chill is apt to return to the surface of the varnish again and again after having been removed. [No. 34.]

ANSWERS TO CORRESPONDENTS.

Brewing.—I believe the experiment suggested by your correspondent (No. 31), was tried some years since at Messrs. Truman's brewery, the steam of the beer being carefully condensed: if I remember rightly, it was a decided failure, the condensed water having hardly any flavour.

Brewing, No. 31.—Your correspondent may probably obtain some information on an analogous subject by tracing the Patent Registers of the year 1831, as I believe in that year Mr. Hicks, of Wimpole-street, patented an invention for condensing the alcoholic vapours arising from the *baking of bread*, with what success I am not able to say.

Book Indexing.—I must differ from the answer to question 28, given at page 131, in which your correspondent says that letterpress printing has been attempted upon the edges of volumes, but without success. I have several foreign books very well lettered in this manner, and I find them very convenient for reference; the edge of each section of the volume is stained of a slightly different colour, and the title very clearly printed on it in legible letters.

PATENT LAW AMENDMENT ACT, 1853.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

From Gazette, 4th Feb., 1853.

Dated 12th Jan., 1853.

88. F. and A. Laurence—Improvements in sluices and lock-gates.

Dated 15th Jan.

104. W. Bailey—Construction of railway signals, &c.

Dated 18th Jan.

122. F. G. Underhay—Machinery for mowing.

Dated 19th Jan.

129. W. Vincent—Improvements in cocksor taps.
 131. J. R. Cooper—Improvements in fire-arms.
 133. W. E. Newton—Improvements in lamps. (A communication.)
 135. C. Malo—Improvements in steam generators.

Dated 20th Jan.

137. J. Crabtree—Machinery for winding and doubling yarns.
 138. P. R. Jackson—Hoops and tyres for railway-wheels, &c.
 139. J. W. Ward—Manufacture of textile fabrics.
 140. C. Ward—New construction of bassoon.
 141. C. Ward—"A cymbal drum."
 142. R. M. Deeley—Grates of furnaces in glass manufacture.
 143. H. de Manara—Arrangements for preventing sea-sickness.
 144. W. Riddle—Ornamenting walls and surfaces.
 146. A. T. J. Bullock—Improvements in taps and cocks.
 147. W. Williams—Refrigerating apparatus.

Dated 21st Jan.

148. G. Carter—Construction of furnaces.
 149. E. Edwards—Knobs and handles of glass for doors, &c.
 150. Capt. J. Addison—Communication between guard and driver by means of a lamp-signal, &c.
 151. A. A. Meijssenheijm Knipschaar—Illuminated night-clock.
 152. G. Thornton—Propelling vessels.
 153. J. Middlemass—Application of a new material for portable houses and other buildings.
 155. W. Taylor—Production and application of heated air.
 156. Rev. M. Andrew—Fastenings for windows.
 157. A. Prince—Articles of furniture from produce of plants of the cactus tribe, and preparing the same. (A communication.)
 158. W. J. Curtis—Excavating, or digging-machine, &c.
 159. R. Plant—Construction of glasshouse furnaces.
 160. J. Chubb and J. Coater—Locks and latches.

Dated 22nd Jan.

161. L. J. J. Malegue—Composition for dyeing.
 162. B. Quinton—Fastening for brooches, &c.
 163. J. P. M. Myers—Artificial fuel.
 164. W. Sharples—Apparatus for marking at billiards and other games.
 165. W. D. Stevens—Signaling between one part and another of railway trains.
 166. G. Fife, M. D.—Safety-lamps, &c.
 167. J. Medworth and L. Lee—Lithographic presses.
 168. J. Paul—Machinery for making drains.
 169. P. H. Desvignes and F. Xavier—Galvanic batteries.
 170. A. W. Callen—Modes of giving and transmitting multiplying rotative motion to shafts, &c.

Dated 24th Jan.

171. H. Brinsmead—Reaping-machine.
 172. H. A. Holden, E. Bull, and A. Knight—Communication between guard and driver.
 173. B. Perreyon—Fastening buttons, improved button and machinery for same.
 174. D. C. Knab—Process of and apparatus for distilling, &c.
 175. D. Beatson—Propelling ships.
 176. W. Nairne—Dressing yarns.
 177. C. Randolph and J. Elder—Propelling vessels.
 178. W. Kendall—Manufacture of boxes, &c., and machinery for same.
 179. J. H. Johnson—Aërial navigation and machinery for same. (A communication.)
 180. J. Stevenson—Machinery for spinning flax and tow.
 181. A. E. Bræe—Signals from one part of railway train to another.

Dated 25th Jan.

186. F. Roe—Paving roads and streets.
 188. J. Sangster—Umbrellas and parasols.
 190. J. Wiggins—Cement for resisting moisture or damp.
 192. H. H. Price—Raising and forcing water, &c.

Dated 26th Jan.

194. T. D. Davis—Improved valve for steam and gas-engines.
 198. T. F. Cashin and J. Stirk—Grinding machine.
 200. J. H. Johnson—Lubricating and apparatus for same.
 202. W. H. Moore—Construction of temporary dwellings.

APPLICATIONS WITH COMPLETE SPECIFICATIONS FILED.

209. C. Noel—A new regulating bit. Jan. 28, 1853.
 242. G. Twigg and A. L. Silvester—Cutting and affixing stamps and labels. Jan. 29, 1853.
 250. W. Williams—Cutting and shearing iron and other metals. Jan. 31, 1853.
 268. T. L. Clarkson—Manufacture of hats, caps, and bonnets, &c. Jan. 31, 1853.

WEEKLY LIST OF PATENTS SEALED.

Sealed 7th Feb., 1853.

116. William Bolivar Davis, of Southampton—Improvements in ships' buoys, life-buoys, ships' fenders, and other similar articles.
 403. Jeremiah Driver, of Keighley, Yorkshire, and John Wells, of Bradford, Yorkshire—Improvements in mouldings in sand and loam for the casting of iron and other metals.
 450. George Heyes, of Blackburn—Improvements in the manufacture of fancy woven or textile fabrics, and in the machinery or apparatus connected therewith.
 519. Matthew Fitzpatrick, of Upper Cleveland-street, Fitzroy-square—Improvements in machinery or apparatus to be applied to locomotive engines and carriages for the prevention of accidents, and also in the manufacture and application of indestructible and non-rebounding cushions, to be applied to the above and other similar purposes.
 684. Thomas Dunn, of Pendleton, and William Watts, jun., of Miles Platting, near Manchester—Improvements in the construction of railways.
 933. James Rothwell, of Heywood, near Manchester—Improvements in looms for weaving.
 971. Frederick Maekellar Gooch, of Bolton-le-Moors—Improvements in the construction of railway signals, and in machinery or apparatus for working railway signals.
 1005. Emile Kopp, of Accrington, and Frederick Albert Gatty, of Accrington—Improvements in printing or dyeing textile fabrics.
 1108. Juan Nepomuceno Adorno, of Golden-square—Improvements in the manufacture of cigars, cigarettes, and other similar articles.

Sealed 9th Feb.

355. Peter Warren, of Strathmore-terrace, Shadwell—Improved material applicable to many purposes for which papier maché and gutta percha have been or may be used.
 476. Samuel Marsh, of Mansfield, Nottinghamshire—Improvements in the manufacture of woven fabrics, by means of lace machinery.
 650. James Wotherspoon, of Glasgow—Improvements in the manufacture or production of confectionary, and in the machinery, apparatus, or means employed therein.
 753. Robert Sandiford, of Tottington Lower End, near Bury—Improvements in apparatus for block-printing.
 757. Thomas Taylor, of the Patent Saw Mills, Manchester—Apparatus for measuring water and other fluids, which apparatus is also applicable to the purpose of obtaining motive power.
 788. William Williams, of Birmingham—Improvements in electric telegraphs.
 798. Jean Joseph Jules Pierrard, of Paris—Improvements in preparing wool and other fibrous substances for combing.
 826. Francis Bywater Frith, of Salford—Improvements in machinery or apparatus for dressing, machining, and finishing velvets, velveteens, cords, beaverteens, and other similar fabrics composed of cotton, silk, wool, and other fibrous materials.
 850. William Henry Winchester, of Tamerton Foliot, near Plymouth—Improvements in splints.
 903. William Pink, of Fareham—Improved construction of stirrup-bar for saddles.
 935. James Edward McConnell, of Wolverton—Improvements in locomotive engines.
 1069. Richard Taylor, jun., of Queen-street, Cheapside, and John Arthur Phillips, of Upper Stamford-street—Improvements in treating zinc ores.
 1070. Clement Dresser, of Basinghall-street—Improvements in combining materials to be used in substitution of whalebone and other flexible or elastic substances. (A communication.)
 1087. George Sands Sidney, of the Willows, Brixton-road—Improvements in jugs or vessels for containing liquids.
 1097. Joseph Matthews, of Strickland-gate, Kendal—Burglary alarm.
 1100. William Robertson, of Barrhead, Renfrew—Improvements in certain machines for spinning and doubling cotton and other fibrous substances.
 1115. William John Silver, of 47, Clark-street, Stepney—Improvements in giving motion to capstan and other barrels.
 1116. George Gwynne, of Hyde-park-square, and George Ferguson Wilson, of Belmont, Vauxhall—Improvements in the manufacture of candles, night-lights, and soap.
 1136. Thomas Greenshields, of Stoke-works, Worcester—Improvements in the manufacture of alkali.

WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Date of Registration.	No. in the Register.	Title.	Proprietor's Name.	Address.
Feb. 9	3419	Improved Fish-tail Burner.	Henry and John Gardner	453, Strand.